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RETARDED DILATATION OF THE OS UTERI IN LABOR.

Read before the Philadelphia County Medical
Society.

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PART I.

In selecting this subject for a paper to be read before the Society, it is not my purpose to bring forward any original ideas, nor to present any facts which may not be familiar to every member of the Society, but rather to put into groups, and separate, the morbid conditions which delay the first stage of labor, according to their several causes, and suggest the application of appropriate treatment adapted to the removal of these causes.

Every practitioner of obstetrics can testify to the annoyances arising from delay in the first stage of labor. It is looked upon as the stage in which nature acts her part without allowing interference, in which neither the hand of man, nor the tool of the mechanic should be used to hurry the process of parturition. In the second stage, after the os uteri is opened, we can hurry the work by mechanical interference, either manual or instrumental; in the third stage we are impelled to aid the emptying of the uterus by active assistance, by pressure from without, even when nature is quite capable of ending the work herself. But we are taught that in the first stage it is nature's prerogative to complete the process unaided, as a rule, and that we must simply exercise our patience in wait-

ing; that she will take care of the mother and child, and that to interfere will be "meddlesome midwifery." How many of us have known what it is to sit hour after hour by the bedside of the patient, waiting anxiously for the dilatation of the os, in our younger days, afraid to leave the sick-room lest some sudden change would come, and knowing that we were needed elsewhere by the exacting and impatient sick.

It is to the different conditions which delay the first stage of labor, and the means by which we may safely and intelligently overcome them, that I wish to call your attention.

These causes of delay may be divided into two classes, viz: first, those dependent upon conditions in the cervix uteri itself, usually included under the general name of rigidity of the os uteri; and second, those dependent upon the absence of dilating force, often mistaken for, and treated as, cases of the first class. We may then divide them loosely into cases of real and apparent rigidity, and the importance of nicely distinguishing between these two classes has suggested this paper. I wish to call attention briefly to the diagnostic points of each class, and the appropriate means of its relief, and I will confine myself this evening to the consideration of the first class, asking the indulgence of the Society at some future time to finish the subject.

The first class may be divided into (1) active rigidity and (2) passive rigidity, or as the late venerable Professor Hodge preferred, into vital and physical rigidity.

1. Active or vital rigidity, or, as it is generally and familiarly known, spasmodic contraction

of the os uteri, is not strictly speaking a rigidity of the tissue of the cervix, any more than the contraction of the uterus in the pains of labor could be called a rigidity. It is essentially a spasm; it is a neurosis; it is a morbid functional condition in which the circular fibres of the neck spasmodically resist the dilating force brought to bear by the contraction of the body. There is a hyperæsthesia; an over-sensitiveness which pleads to be let alone; the touch of the finger produces pain, and the touch of the fetus violently brought against it leads to an angry resistance. Its diagnosis is very marked; when we find it as a complication of labor, that labor is pre-eminently a suffering one. The initial pains are severe, and as the labor advances they become intense; the patient is nervous, restless, in great distress, moral as well as physical; her skin is hot, her pulse frequent, and her mouth dry; she has all the signs of a febrile condition; when you examine her by the touch, she shrinks from it in agony; the perineum and vagina are dry and hot; if you can reach the os in spite of her resistance and entreaties, you find it slowly yielding, if at all; but in the absence of a pain you usually find it with a round well defined edge, perhaps even considerably dilatable, and you think the labor has advanced admirably; but so soon as a pain comes on, when the bulging membranes or the cranial wedge is driven down against the rim of the os, you find the os contracting upon it, and the soft dilatable tissues harden up, and the edge loses its rounded form and stretches out over the wedge with the thinness of paper. The patient shrieks with suffering, and especially from your touch, which is now increasingly painful. The shock upon the whole nervous system is so great that the uterus itself is paralyzed in its effort, and while the presenting mass is driven down, firmly and violently at first, against the rim of the os, the contraction suddenly subsides, the mass goes back, and nothing is accomplished. Here we have genuine and successful resistance; the contracting uterus drives the mass forward, the brim of the pelvis lets it pass, it impinges fairly upon the vaginal portion of the uterus, and fits tightly against the rim of the os, but the os refuses to open.

Now, what will we do with this condition? If we recognize in it evidences of nervous irritability, clearly we should expect to gain the

best results from constitutional means which would soothe that irritability. And I think the practical results of such treatment fully confirm the theoretical suggestion. We find the condition abating promptly under such influences as quiet the nervous excitement, allay sensibility, diminish the activity of the circulation, and control the local congestions. Foremost among the remedies which promise these effects is *opium*; positive and prompt in its action, free from any danger, and never contra-indicated except in very marked peculiarities of the patient in her susceptibility to its unpleasant effects. If we give her a suppository of one-half grain to a grain of watery extract of opium, or its equivalent in morphia, or powdered opium, or the enema of laudanum, or if preferred, the hypodermic injection of the salt, or in cases of much febrile action, administer by the mouth repeated doses of morphia, with diaphoretics and digitalis, we are pretty confident of certain results. Our patient falls off into a quiet sleep; her pains abate; her heart's action diminishes in violence; after a period varying from an hour to two or three hours, she wakes up refreshed, with her whole moral and physical condition improved; her pains come on regularly, with little suffering in the intervals. When we examine, we find the vagina cool, much less sensitive; the os soft and yielding, with a good round edge remaining during the pains, the uterine contraction with every recurrence now clearly opening the os, and the labor proceeding steadily and normally to its end. I am so confident of these results, that I rarely look for any other means, when I have such a condition present.

We may get from the use of *ether* or *chloroform* the same result; but I think as we get on in experience we are less disposed to run too quickly to our anæsthetics. We call them perfectly safe, and so far as the mere breathing of them goes, they are so, in cautious hands, given merely to allay pain without causing profound stupor. But they do diminish the force of the contractions somewhat, and if given too long they do produce a muscular relaxation which may interfere with the tonic contraction of the uterus in the third stage of labor, and give us hemorrhage from inertia. If we resort to them very early in labor, we cannot easily afterward withdraw them, in face of our patient's touching appeals, and I am not in the way of making use of them in so early a stage of the labor as that

in which we are compelled to resort to opium for the relaxation of the spasm of the neck.

Chloral has lately become a favorite remedy, given in large doses repeated. I have had little experience with it for the purpose; for I regard it as much more prostrating in its after-effects, thus given, than opium, and less controllable than the vapors of ether or chloroform. *Tartar emetic*, as recommended by Dr. Evory Kennedy, of Dublin, given in repeated doses until emesis is produced, every ten or fifteen minutes, is a very efficient and safe remedy; the antimony, while it relaxes the circular fibres of the os, and diminishes the nervous irritability by its refrigerant effect, does not depress the muscular power, or abate the force of the uterine contractions, as might be supposed. Its disagreeable action in the production of nausea and vomiting, however, do not recommend it. The *warm bath* and the hot uterine douche are very efficient aids in tedious cases, by their general and local soothing effects.

Bleeding from the arm has had its powerful advocate in Dr. Dewees, and no doubt any spasm can be relaxed by a condition of syncope as recommended by that able authority; but if your experience sustains mine in finding this spasmodic contraction in the anæmic and already feeble woman, depressed and worn out by the continued ailments of pregnancy, you will not often resort to bleeding *ad deliquium*, which seems to have been with Dr. Dewees an almost every-day matter. In this spasmodic rigidity, local efforts at dilatation are, in my opinion, excluded, as generally being a uselessly painful procedure. The simple *traction* by the finger upon the os, sensitive to an extreme degree, merely aggravates the pain and increases the spasmodic contraction already developed by the pressure of the foetal mass; the use of the Barnes dilator, or still more the Molesworth, can only have the same effect as digital traction greatly intensified. After the spasm subsides, if there remain a true rigidity of tissue, these measures become not only admissible, but also urgently demanded.

One measure, which has been recommended by English and French obstetricians in every form of rigidity, I cannot too strongly deprecate in this form, as utterly unjustifiable; this is *incision* of the cervix uteri. What would we think of a surgeon who would use the knife in an acute spasmodic stricture of the

urethra; or the physician who would propose to relieve trismus by dividing the muscles of mastication. And yet we find cervical incision advocated and practiced by its advocates, in a simple spasm, without even an attempt at relief by the simple and almost certainly successful use of constitutional means. In a very interesting and ably written thesis presented by my friend, Dr. Bunting, of Roxborough, to the Faculty of Medicine of Paris, in 1861, in which he advocates the incision of the cervix with all the enthusiasm of a young surgeon fresh from the contagious influence of the clinique, he mentions, among other cases illustrative of the success of the operation, one in which a primipara of twenty-five years presented a typical case of spasmodic rigidity; a few hours after dilatation began, the accoucheur, M. Taurin, whilst the os was undilated, thin and painfully rigid, ruptured the membranes. No constitutional means were resorted to, no baths, no sedatives; but as the symptoms continued, nine hours after the rupture, an incision was made into the anterior lip and the head drawn through by the forceps. These forceps probably were not engraven with Blundell's motto, "*arte non vi*."

2. The second form of rigidity is the passive, or, as Dr. Hodge has called it, "physical." This is not a mere functional condition, dependent upon constitutional causes, but is a genuine rigidity, a want of distensibility, dependent upon tissue peculiarities. It may vary from the simple firmness of tissue found in the cervix of many primiparæ of advanced years, as a want of true physiological softening, to the cartilaginous hardness of a fibrous or malignant degeneration. Unlike the intermittent paroxysmal condition of which we have been speaking, attended with general and local symptoms of nervous and vascular derangement, it offers a continuous resistance; the os uteri is natural in its character; its margin round and well-developed; its tissues not sensitive; the vagina not hot nor dry; perhaps, unusually moist; the foetal mass is carried down firmly into the brim of the pelvis, and impinges frankly against the rim of the os, excluding the finger from entrance into its cavity during the contraction of the womb; and yet the os does not open; and the patient gradually becomes exhausted by the steadily recurring and yet fruitless pains. Here we have a very different condition to be met by very different means from those used in the spasmodic variety. While

general treatment may be auxiliary, we must rely chiefly upon local and mechanical means to overcome a mechanical resistance. We may use our opiates, and sedatives, and refrigerants, to save our patient from the effects of too long-continued suffering; but they will not do much to aid us in opening the os. Our local means should be addressed, firstly, to applications to soften the indurated tissue, and secondly, to mechanical means to force open the os. Of the first, the most useful is the *douche* of hot water; this I use at a temperature of about 105° to 110°, injecting about a quart, in a stream, from a Davidson's syringe, directed against the os and cervix, repeating the operation every hour or two, as long as necessary. In several cases of anatomical rigidity, in old primiparæ, or in cases of slightly premature labor, I have seen the cervix softening rapidly, and, under the increased force of contractions of the womb, the os dilating promptly. For this purpose, the Davidson's or any pump syringe throwing an intermittent stream is preferable to the bag or fountain stream, which is continuous and of little force, although an admirable instrument for irrigating in uterine diseases or puerperal troubles.

Of means to produce a forcing open of the os, the simplest is the *traction* by the finger upon the anterior lip, a procedure useful in almost any case of labor not attended by spasmodic rigidity. The index finger of the examining hand is to be carried between the fetal mass and the anterior lip of the uterus in the absence of pain, allowed to remain there until the pain comes on, and then drawn forward toward the vulva, stretching the rim of the os in conjunction with the dilating force of the womb. If the membranes are unruptured, and there is reason why their rupture should be avoided, caution should be used, in introducing the finger into the os, not to touch them rudely; with a little care there is no danger.

We have in the *india-rubber bags* of various forms most valuable dilators; of these we have first the colpurynter of Braun, of Vienna, being a bag for introduction into the vagina only, expending its dilating force upon the vaginal attachment of the cervix, and not within the canal. It may be used with warm water, and distended until the vagina is filled to its entire capacity, the bag bulging beyond the vagina. It may be allowed to remain in this position for fifteen minutes, and then

withdrawn, to be renewed again after a rest. Sometimes I have with advantage alternated the use of hot and cold water in the colpurynter. Better than this is the fiddle-shaped bag of Dr. Robert Barnes, of London; so valuable and so well appreciated that it is familiar to every practitioner of medicine. Using successively the three different sizes, we have a powerful, and yet, if properly used, a safe and gentle means of dilating. It may be carried into the cervix without danger of rupturing the membranes, and the opening of the os be almost fully accomplished while the child is freed from the compression of a diminished uterus. But I would caution the accoucheur, firstly, to try his instrument before introducing it, or he may, after a tedious effort to get it safely within the cavity of the uterus, find himself foiled in expanding it, from some defect in its walls; and secondly, never to introduce air as the distending agent. This last point was vividly impressed upon my mind a few years ago, in a case which I was called to see in great haste. When the Barnes bag had been introduced for the purpose of completing a premature labor induced in a contracted pelvis, air had been forced into the bag until it was largely distended, bulging into the vagina; the patient was perfectly well up to that time, everything going on satisfactorily, when suddenly the inner end of the bag gave away, the whole amount of air contained in it being forced into the uterine cavity, peeling up the membranes (which were unruptured), detaching the placental margin and entering the uterine sinuses. The patient instantly became livid, shrieked with a sudden agony, respiration ceased, the pulse became extinct, and death seemed imminent. By prompt and powerful stimulation and artificial breathing, kept up for some time, she fortunately recovered; but the lesson was too deeply impressed to be ever forgotten. Molesworth's dilator, another of the rubber-bag instruments, is too violent in its action, and has not elasticity enough for use in the full term uterus, and cannot compare with the Barnes bag in ordinary conditions of rigidity.

Sponge tents have been highly advocated by some accoucheurs for use in dilating a rigid os; I have always been afraid of them in the pregnant uterus, while valuing them most highly in other conditions. The sponge tent, as we all know, as it expands, buries itself in the tissues, and when we remove it after expansion we find

it covered with blood from the lacerated surface from which we have torn it. Now, we know, unfortunately, too well, how easily the abraded vaginal and uterine surfaces of a puerperal woman will absorb septic matter, and how easily inflammatory action may be set up in these tissues; and we cannot be too cautious how we expose such a surface to the decomposing discharges from the uterine cavity, as a starting point for a puerperal fever. I could recall cases which have come to my knowledge, never reported publicly, where the use of the sponge tent to induce premature labor has been followed by fatal results, no doubt from the causes I have given. Their action is also too slow to be depended upon in the condition under discussion.

After dilatation has progressed far enough to make them available, we have an admirable aid to dilatation in the *obstetric forceps*. In this position I know that I will meet with much dissent. There are those who take the ground that the obstetric forceps should never be carried within the lips of the uterus, nor used until the os is fully dilated. I hope, in a later part of this paper, to show that in many cases such restriction would render the termination of labor an impossibility without mutilation of the child. But why such objections to the use of the forceps within the uterus? I grant that they must be properly constructed and properly used. They must be forceps having blades of a shape to fit closely to the head, not increasing the bulk of the cranium in passing through the cervix, allowing the soft tissues of the head to bulge through the fenestræ and protect the uterus from any pressure; they must, therefore, have oval fenestræ, upon the Hodge or the Davis model; they must be applied conscientiously to the sides of the head (the only uniform surfaces adapted to receive the uniform concavities of the blades) and its long axis; and traction must be made in imitation of nature's efforts, the force from before being simultaneous with, and precisely similar in its action to, the force from behind; the uterus and the forceps must act together and alike; the traction must be in the line of the pelvic axis; it must be intermittent; it must be direct, with no contusing lateral movement; and if these conditions are fulfilled, there can be, I assert fearlessly, no more danger to the uterine tissues from the head coming through in the grasp of the forceps than in passing

without them. When, then, the os uteri is sufficiently dilated to allow the introduction of the blades, they may be carefully applied, and during each uterine contraction the head may be drawn down gently, and with as little compression as may be required to keep the blades in place. We have then nature's own dilator, supplemented by art simply for the increase of its powers, without any change in the method of action, no new plan of operation being introduced.

There remains one other method of opening the os in passive rigidity of which I wish to speak, viz., *incision*. This method has its strong advocates and its firm opponents. Its immediate advantage is clear: you have a foetal mass to pass through an unyielding ring; you divide with the bistoury or the scissors this ring, and the foetal body, if there be no other impediment, easily glides through. But is this the only side of the picture? Dr. Barnes says the knife, judiciously employed, can do no harm. His advocacy of its use is supported by a great array of names which I need not mention. To me it is an operation justifiable only under extremely rare conditions, which, so far, I have never met. Dr. Hodge tells us that in forty years' experience he has never seen the necessity of incising the os in labor, although generously, in deference to the opinions of others, he admits that such cases might possibly occur. We all of us must know, from observation, what an immense distending force a canal in the human body may be safely subjected to, and how it will gradually yield before that force, if not too violent, as illustrated in the opening of the perineum, where we find that a firm and rigid canal, at the onset of labor not dilatable to the extent of an inch and a half in diameter, will open under the gradual pressure of the child's head, guarded carefully to prevent too rapid and violent distention, and the head, measuring four inches in diameter, slides over the fourchette without an injury to the skin. But let a little laceration occur, if it be but the slightest appreciable loss of continuity, and the next expulsive pain will tear it through to the sphincter, in spite of all effort to the contrary. The elastic tissue in the human body will bear an immense strain without loss of integrity of its surface, but when that once gives way, we have absolutely no control over the extension of the rent, short of the full size of the passing

body; and instead of a stretching of the rim of the canal, we have a tearing of the adjacent tissues. Now, this principle, so easily illustrated in the perineum, holds with still more force in the case of the os uteri. Firm and rigid as it may be, it will gradually yield before the distending force, until the great mass of the foetal head passes safely through it; but if we make an incision, first, into the rigid tissue, the distensibility and elasticity of tissue is nothing; it is valueless; the incision, if not large enough to allow the head to pass completely at one pain, will be extended into the adjacent tissues of the uterine wall, and where they will stop no one knows. If many cases have done well, the accoucheurs in charge may truly be congratulated. But it may be said this is the isolated view of a man who cannot support his theoretical fears by clinical experience in such results. I heartily hope I may never have the opportunity to verify them at the bedside. But if my fears are unfounded in experience, others of vastly higher pretensions than myself have had the same views. Dr. Hodge expresses his fears of rupture extending to the uterus. Madame La Chapelle deprecates strongly such procedure. Baudelocque brands it as the conception of an instant of phrensy to propose it. Dubois speaks of it as useless in a thickened condition of the cervix, the passage being no more easy than if it had not been done. He also cautions against the danger of hemorrhage, and of extension of the cut into the body of the uterus. Chailly Honore considers it only justifiable in thin contracted os, on account of the danger of extension, and says it should never be carried beyond the internal os; he records one case of vesico-vaginal fistula resulting from it, and one death from uncontrollable hemorrhage. Other authorities equally strong could be quoted, but time does not permit. If the patient escapes these accidents, other results may follow, equally to be deprecated. We have in the incised tissue open surfaces for the absorption of septic fluids, even more probably than with the sponge tents as before mentioned. This may not be so serious a danger with our present antiseptic resources, but it is of some weight. An almost certain result of these incisions is the presence in the cervix of cicatricial tissue, as union by first intention is greatly improbable, and union by granulation seems to produce cicatrices. The importance of these cicatrices as an element in the painful uterine

affections, has been clearly and forcibly taught us by Dr. Emmett, and when we know that a fissure of the cervix is seen to be attended with prolonged painful disease of that organ, we should hesitate about an operation which will be likely to produce it. But we are told by Barnes and Playfair, and some others, that there are certain conditions in which it is absolutely necessary. That in long-continued rigidity, when there is danger of sloughing of the tissues it is necessary. Now we know that nature provides against sloughing by the intermittency of the contraction of the uterus; we know that in contracted pelves the tissues of the cervix will bear a vice-like pressure between the head of the foetus and the pelvic brim for days together, without any symptom, after delivery, of the slightest contusion of the cervix. In occlusion, we are told that it is necessary to incise; now I would certainly limit this necessity to cases of cicatricial obliteration of the neck; for, inasmuch as the os must have been open for the entrance of the spermatic fluid, nothing but some traumatic inflammatory action, developed during pregnancy, could produce absolute closure of the os at the time of labor. I recently had an opportunity to see a case illustrating the condition of apparently complete occlusion.

March 31st, 1876. I was called by Dr. K. to see Mrs. E., twenty years of age, primipara, robust and vigorous in previous health, no uterine disease or injury of any kind known; had been in labor about thirty-six hours, the last twelve of which had been attended with severe pain. There had been no watery or sanguineous discharge. The patient was becoming exhausted. Dr. K., after repeated examination, was unable to discover any trace of a cervix or os uteri. Upon examination per vaginam, I found the roof of the pelvis completely occupied with a spherical mass, dipping well down into the brim, of smooth, uniform surface, without an irregularity, or prominence, from the pubes to the sacral promontory, which was reached by the exploring hand, with some effort. Not a trace was to be found of either os or cervix. The walls of the uterine globe had been subjected to such powerful distending force that they were thinned out sufficiently to recognize the sagittal suture lying in the right oblique diameter. After my patience was almost exhausted in the effort to find the point of

occlusion, I thought I perceived, about two-thirds of the way from the pubes to the sacrum, a slight variation of the surface, not larger than the end of a probe, giving about the same sense of depression as the os externum in the extremity of a conoidal virgin cerfex, but without the least elevation of tissue around it to mark a uterine neck. Keeping my finger upon it I carried a womb-sound, which I had in my pocket, along it, and was gratified by finding it enter the orifice; I then sent for a uterine dilator (Wilson's) from my carriage, and carrying the slender point into the orifice, I separated the blades gradually, the orifice yielding until it was large enough to permit the introduction of one finger; traction by this, during the pains, soon enlarged it for the passage of another finger, and ultimately the dilatation was completed, the membranes ruptured, and the head entered the brim. The patient was so exhausted by her prolonged effort, that she was unable to complete the delivery unaided. Dr. K. applied forceps, and she was successfully delivered of a still child. Convalescence normal.

Here was an extreme case of apparent occlusion; the temptation to incise was great. How often might a little exercise of patience, in like manner, save the patient from the risk of cutting. I do not wish to indulge in any extravagant tirade against the operation in the hands of a conscientious practitioner of experience and judgment; but I wish to impress upon the young obstetrician the great risk of such a method of relief, its probable ill effects afterward if successful at the time, and the exceeding rarity of its need; and to record my protest against the loose and dangerous teaching which would seem to justify it as an easy and harmless every-day resort in tedious labor.

(To be Continued.)

A CASE OF TRAUMATIC TETANUS IN A YOUNG CHILD, WITH TREAT- MENT AND RECOVERY.

Read before the Central Medical Association of
New York, at its annual meeting in May,
1877, in the city of Syracuse.

BY H. N. BURR, M.D.,
Of Wolworth, N. Y.

The following case is one of unusual interest to the profession, and for that reason I think it important that it should be published, for their benefit. The treatment I think is entirely novel, and under unfavorable results

might be severely criticised by some of the profession. I was called on the morning of October 8th, 1873, to see Charles Laurence, a bright active little boy, aged two years and nine months, who had been well up to this time, with the exception of occasional attacks of spasmodic croup, which had never continued but a short time. During the night of the seventh, he had been taken with a high fever and great restlessness; there was a jerking of the arms and legs, and also of the muscles of the body; and when asleep would start up with a jump and moan, as if in pain. When moved during the night it gave him pain; the head was hot, red, and swollen, and tender to touch. A scar on the forehead had taken on a red and angry appearance, and radiating from it in different directions were deep red lines, which passed to the top of the forehead, and were lost in the hair; to account for the scar, I was told he had been bitten by the house dog eight days before, while he was teasing him; it bled profusely, but healed readily, leaving a scar that continued to look red up to this time. His condition when I saw him, on the morning of the 8th, was as follows: High fever, with the surface hot and dry; very nervous and irritable, and complains of being hurt when he is moved, as though the muscles were sore. He starts up with a cry every few minutes; the head is hot, with the part about the scar red and swollen. When he is moved he acts as if his back was stiff and sore. His breathing short and quick; the pulse full and very rapid, as much as 150, and even more, to the minute. There was a jerking of the muscles of the face, and of the arms and legs. When undisturbed for a few moments he would be quiet and then start up with a jump that would raise him from his bed or his mother's lap. His eyes were bright, with the pupils about natural; he kept them closed unless he was disturbed. The temperature, I regret very much not to have taken, as in the study of the case I find it quite an important feature; some time during the night his mother had given him a dose of castor oil, which had not operated when I saw him. I ordered an injection of warm water to assist its action. I prescribed tincture of aconite root, in drop doses every hour, to reduce the pulse and subdue the dry hot surface, and,

R. Pulv. Doveri., grs. iij.
Potass. nitrat., grs. ij.

every three hours, with a cloth wet in cold water to his head.

On leaving him, I gave his parents to understand that something serious would probably supervene. I saw him about eight in the morning. The injection was given, and his bowels moved freely, from its effects. At dinner he asked for soup, of which he ate some, but did not retain it but a short time, when it was vomited. Soon after this he became convulsed with a spasm of the arms and legs, and the whole body became stiff, and he sank into a deep sleep, from which he could not be aroused. He was, by his parents, put into a warm bath, which relaxed the muscles a little. His jaws were set and they could not get him to swallow the least thing. When they found their efforts were of no avail, I was sent for, and saw him not far from 1 p. m. I found him lying in his crib, breathing with a slow and labored effort, with a rattle in his throat. In trying to get some liquid in his mouth I found the jaws were set, and after prying them open no effort would be made to swallow. The legs and arms were stiff, and the hands were closed. Pulse full, strong, and bounding, the skin very hot but moist; the eyes were closed, but when opened the pupils were dilated very wide and sensitive to the light. His head was hot and the scar very red. Judging, from his breathing, and the rattle in his throat, that death was fast approaching, I concluded nothing could be done for him, and that he must die.

After a few moments' reflection I thought of using cold water showered on his head. This was done to relieve the anxiety of his parents, and to have the appearance of doing something. I first gave him an injection of warm salt and water, with turpentine, to divert the blood from the head. I then took him out of the crib, with his vital powers sinking, and commenced to pour cold water on his head. This I felt was my only hope, as he was unable to swallow the least thing, and there was the rattle which I had heard in several instances where patients had died from apoplexy. His head was held over a pail, and with a pitcher that would hold a quart I commenced pouring cold water, right from the well, in a small stream on the back of his head, letting it fall a little more than one foot. This was continued for three hours, with an occasional intermission of a few minutes at a time, when he sank into an easy slumber, and in a short time awoke, and was in his

right mind. In connection with the cold water we used mustard to the back of the neck and soles of the feet. During the first half-hour there was but very little change in his condition, the water not seeming to be noticed. At the end of that time there was a change in his breathing, which became easier and more natural. The rattling had entirely subsided, which showed there was relief to the pneumogastric nerve. This change was apparent to all who observed him, but it was the only change until three quarters of an hour had passed, when he moaned and opened his eyes for the first time. The eyes were dilated and extremely sensitive to the light. Soon after his breathing improved and he moaned, the rigidity of his muscles gave way, and we could get his mouth open sufficient to introduce anything into his mouth. The effort to swallow was terrible, and gave me the impression that he was choking. He would open his eyes, which were glaring and glassy, and raise himself almost from the pillow in his struggle to swallow, and I did not give more than half a teaspoonful at one time. I did not persist in giving him medicine by the mouth until I had used more water. If left for a few minutes without the water being poured on his head, he would sink away into the deep sleep, from which nothing would arouse him but the cold water poured on his head. As soon as I thought it safe to do so, I gave him a dose of morph. sulph., ¹ gr.; camph. pulv., 2 grs.; this I gave to get the effect of the morphine in contracting the pupil. At times he would moan, and cry out, and try to move, but took no notice of any one or anything, except the cold water, and not even that until it had been continued for some time without interruption, except long enough to replenish the pitcher. During the first hour there was not much improvement, except in the breathing and muscular relaxation, and during this time the water had been faithfully applied. A larger pitcher was now procured, and its contents could be poured in a small stream entirely on his head with no expression from him except to moan when the pitcher was nearly empty. The pitcher would be again filled and continued until he would come partially to his senses, when we could see by his actions that the intense cold was distressing him, when we would stop until he sank again to sleep. In an hour and a half I gave him another dose of the

morphia and camphor, as the pupils were very largely dilated. It was about 4 P.M. when he sank into his natural sleep, and about five awoke, and knew his parents and all about him. I gave him $\frac{1}{8}$ grain morphia every four hours, to keep him quiet, and drop doses of the aconite as often as every hour, if it was required, to keep the fever down and also to keep him perspiring freely, and in case his skin became hot and dry to increase the amount. Bromide of potassium, five grains every two hours, to allay the jerking of the muscles of the arms and legs. He passed a quiet night, with some flashes of fever and jerking of the muscles.

9th. Saw him this morning, and found the pupils were not so largely dilated as yesterday; pulse not so strong nor so frequent, and not much fever. There is some jerking of the muscles, and starting up in his sleep, with a sharp irritable cry; also complains of its hurting his back when moved. The scalp swollen and red, with the angry look about the scar. The urine is not high-colored. I had the scar painted with a solution of veratrum viride and glycerine. Ordered mustard to the back and feet, and continued the morphia and camphor, bromide potassium and aconite, renewing my instructions to keep him moist.

10th. This morning he is very much improved from yesterday, being bright and cheerful, with some of the nerve symptoms present, while the jerking was all gone. I discontinued all medicines except the bromide of potassium. I saw him again on the 11th, and could see no signs of the fearful disease about him, while the swelling and redness about the scalp had subsided and the scar had a more healthy look.

He continued well until the 30th, when his father called on me and said the boy was not so well as he had been, but was extremely nervous and irritable, with jerkings of the arms and legs, and jumping when he went to sleep. He was very much afraid the convulsion would return. The scar where he had been bitten was red and swollen, with some streaks running from it, and his head was hot. I gave him morphine and bromide of potassium, and ordered cold water to his head. Under the use of these medicines his symptoms subsided, and in a day or two he was well. There was a number of times during the year when he would get very nervous and irritable, but at no time did he ever have spasms. The boy is now living, a bright, active little fellow. The dog was

killed a few weeks after, but was not rabid; it had been growing cross toward the little boy for two or three weeks before he was bitten. Had the boy died, most people would have said it was from hydrophobia, but since he got well, that cannot be, and I must conclude I had a case of tetanus. I think now, but for the persistent use of the cold water he would have died, and I may attribute my success in this case to its use.

HOSPITAL REPORTS.

COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK.

CLINIC OF THOMAS M. MARKOE, M.D., PROFESSOR OF SURGERY, MAY 28TH, 1877.

Reported Expressly for the MEDICAL AND SURGICAL REPORTER.

Cicatrix after Removal of Fatty Tumor.

This is the patient, gentlemen, from whose breast we removed the fatty tumor one week ago to-day, and we want to see how the case has behaved. The woman says she has been perfectly comfortable, except that at one time she felt a little gnawing pain. It was ascertained that this was due to the presence of a small quantity of blood in the edge of the wound, which had begun to decompose, and after this was evacuated the case did perfectly well. It must be kept quite still for another week, in order to secure the best cicatrization.

Caries of Cervical Vertebrae, with Abscess.

What is the story of this child? You see its peculiar attitude, which it never varies. The occiput is thrown back; the chin elevated; and the head deflected to the right. You observe also that the movements of the head are very much restrained in every direction; and when a closer examination is made, a tumor of considerable size is discovered, just inferior to the sterno-cleido-mastoid muscle. It is about opposite, and extending a little above, the larynx. It is, perhaps, an inch and a half in diameter; circular in outline; rather flat; and characterized by a slight degree of pulsation. The latter is evidently communicated, because we find the carotid artery is pushed to one side by it. This circumstance is of diagnostic value; for if it were an enlarged gland, the artery would not be thus disturbed. Whatever it is, therefore, it must be on the same level with the artery; that is, lying upon, or very near, the vertebral column. That it is very deep-seated, and affects the larynx to a certain extent, we also infer from the fact that the breathing is somewhat interfered with.

Now what might there be in this position? For one thing, we have tumors growing from the spinal column; but these are infinitely rare

in children of this age (four years). These may be fibrous, myomatous, cancerous, etc.; but I never heard of any of them at this time of life. But what is its general character? Evidently it contains fluid; and we can at once conclude, therefore, that it is cystic or an abscess. Again, cystic tumors in this position are exceedingly rare in children; and we come to the conclusion, then, that it is an abscess. Abscesses frequently resemble various forms of tumors, and in 99 cases out of 100 when they are in this position they are due to caries of the cervical vertebrae.

Now do the symptoms of the case correspond with this diagnosis? Yes. We have already noticed the constrained position of the head, which is due to the fact that she instinctively throws it back, in order to remove the weight as much as possible from the diseased bodies. It is worth your while to put your hand back of the neck and notice the rigid condition of the muscles. I know of nothing else producing this characteristic attitude, except sudden contusions, occasionally. In these cases, however, it passes off very soon. Every motion of this child is in accordance with the leading idea of keeping the weight off the bodies of the vertebrae. The great indication, therefore, is to support the head by a properly constructed apparatus. The abscess should be left alone, as it would be very injurious to open it now. If, later, its walls grow thin and it should point, it may be evacuated by aspiration or by means of a valvular opening.

Infantile Hernia.

This paroxysm of crying, in which the infant whom I now bring before you is indulging, is just what we want. You notice a tumor in the left hypogastric region. On examination it is found to be in the inguinal tract, and that pressure removes the tumor entirely. The diagnosis is, therefore, very simple, but the case is especially interesting because the hernia (which there can be no doubt that it is) is still in the inguinal canal, not having, as yet, got beyond the external abdominal ring. It is in this class of cases that a perfect cure can almost invariably be obtained by the use of a well-adapted truss.

Whitlow.

Here are two men with swollen and painful fingers, which illustrate the two varieties of a very common affection, whitlow. The two kinds are the superficial, and the deep or bone felon. The first is not really whitlow at all, and ought not to be regarded as such, since it is simply a kind of vesication. The best treatment for it is to keep black-wash applied to it, with a covering of oiled silk, a week sufficing for its cure. True whitlow is a much more serious matter, involving all the tissues down to the bone. There is a right way and a wrong way of treating it, and the right way is to go straight to the bone with your knife, and then you know where you are. So I tell our friend

here, who has been suffering so much, and in order to make the incision properly, I direct him to place his hand on the table, where it can be held perfectly steady by my assistant.

Abscess of Neck.

This man is in good health, with the exception of an abscess beneath the inferior maxillary bone, which has now continued for some time. This has been evacuated, and absorption is gradually going on, but in order to hasten this it will be necessary to blister the surface thoroughly with nitrate of silver. The blister thus caused is apt to be very painful, but the application of the nitrate of silver in such cases is more beneficial than anything else that I know of. You see that I first wet the surface with a sponge, and then apply the solid stick carefully in every part of it. If this should be repeated once a week for a little while, it would probably remove all suppuration entirely in a short time.

Ingrowing Toe Nail (So-called).

What is commonly denominated ingrowing toe nail, is in reality, nothing of the kind. In these cases you will find that the nail is all right. What then is the matter? The young woman now before you presents a very useful case, because it affords an example of an affection which is so common; and I take more interest in explaining cases of this kind than in the most elaborate and difficult operation, because you are liable to meet them every day in your practice. This matter of so-called ingrowing toe nail, I am sorry to say is, as a rule, entirely misunderstood, and improperly treated. The nail grows into the matrix, which is simply an involution of the skin, and a continuation of the periosteum; and a portion of the nail lying in the groove of the matrix is smooth and rounded, and terminates in layers of epidermis. Through these layers a part of the nutrition of the nail goes on.

Here is an instance in which the tissues have become swollen and highly inflamed, and protrude over the nail. What is the explanation of this state of affairs? A tight boot has been worn, which presses the matrix forcibly against the nail. This occasions tenderness, and in order to relieve it, the edge of the nail is cut. This procedure results in the formation of granulations, and now the nail begins to plunge right into these granulations. Then the scissors are inserted, notwithstanding the severe pain thus occasioned, and more of the nail cut away. A fatal mistake. The surface becomes ulcerated and granulating, because, instead of the normal bulbous extremity of the nail, you now have a sharp, ragged edge pressing into the inflamed tissues. It is rough, harsh and irritating, instead of being smooth and rounded. If you have ever compared the beautiful and symmetrical sting of a bee with the rough and uneven point of even the finest cambric needle, under the microscope, you will understand exactly the difference to which I

refer. The needle seems as clumsy as a crow-bar.

Now, as to the treatment. Our friend here must wear a loose shoe, in the first place. This is a *sine qua non*. Then the maltreated nail must be allowed to grow and regain its proper shape. While this is going on she will suffer considerable pain, but this will be her penance for having done wrong. By the end of six months the nail will probably have regained its normal outline. If much inflammatory action should continue while this is going on a slippery

elm poultice may be applied from time to time. When the granulations become exuberant, a little pinch of dried alum will be found to be very effective in reducing them. Some persons suffering from this affection find great relief in the daily use of the alum. The chabocs are, however, that our patient will become dissatisfied in waiting so long for a cure to result, and that she will once more resort to the fatal scissors, but we can at least give her fair warning of the long course of suffering which by so doing she will bring upon herself.

EDITORIAL DEPARTMENT.

PERISCOPE.

On the Peristaltic Action of the Intestines.

M. Jules Guérin contributed an interesting communication to the Academy of Science, on this subject, at one of its sittings.

From observation and experience he concludes—

1st. That the matter contained in the intestine moves not only from the *a tergo* action resulting from simple circular contraction of the muscular membrane, but from a double action, propulsive and aspiratory, caused by contraction of the circular and longitudinal planes of the intestine.

2d. In virtue of this double contraction, distributed over the continuous parts of the intestine, one of them, the superior portion, circularly narrowed, forces its contents toward the inferior portion, which, shortened by the contraction of its longitudinal fibres, meets it, receives the contents, and draws them on, by virtue of a kind of aspiration.

3d. This double movement of propulsion and aspiration is reproduced at each separated point of the intestine, by means of the *valvule conniventes*, the borders of which, placed in contact by the circular contraction, form an obstacle to the retrograde movement of the matter.

This physiological conception is not the result of simple induction drawn from the anatomy of the intestine, but is based on observation and direct experiment. Applying this physiological datum to the stagnation of typhic matter in the inferior part of the small intestine, we can understand how this portion, rendered inert by the stupefying action of the toxic agent is deprived of its contractile power, whilst the large intestine is filled by a certain quantity of old fecal matter, so that the double action of propulsion and aspiration cannot be carried on.

The ilio-cæcal valve, obstructed on both sides,

only allows the passage of the liquid matter accumulated at the end of the small intestine; hence, the special liquid diarrhoea during the first days of the disease, and the evacuation of old solid matter at the end of the malady.

Unilateral Hallucinations of Hearing.

Dr. Alexander Robertson, of Glasgow, gives this case in the *British Medical Journal*:—

J. W., aged thirty-seven, states that, as a lad, he consorted with thieves; but he denies having been of drunken habits, though this may well be doubted. About nine years since he was sentenced to imprisonment for fifteen months, on account of theft. After about a year of solitary confinement, he began to hear "voices" which cried in to him at the door of the cell, when it was shut as well as when it was open. Sometimes the voice seemed that of a man; at other times, that of a woman. Ever since then, to use his own expression, they have "terribly plagued" him. They would tell him "not to be ashamed to steal or beg;" they have told him to take away his own life. He had hitherto been able to resist the temptation or order. They have always been in the right ear, "never in the left." He has often been in doubt whether to regard these voices as real or imaginary, but at present he speaks of them as fancies. Without being asked the question, he remarked that he had often put cotton into the ear, which would frequently almost, but not altogether, put the voice away at the time; but it might come back as loud as ever, even though the cotton was still in the ear. His hearing was carefully tested, but no defect was found in either ear; nor had he pain or other abnormal sensation in them.

He also suffers from hallucinations of vision. "I imagine," he said, "I see figures of little men and women, particularly with the right eye." He can see them when the eyes are shut. The other senses are not involved.

He is quiet and dull in disposition. His general health and condition are good.

One-sided hallucinations are in mind the analogues of unilateral convulsions or hyperæsthesia. In the latter cases, through morbid action, the centres for motion or sensation, or a part of them, proportionate to the amount of the side involved, would seem to be called into excessive exercise; so, in the former, the highest centre for hearing on one side, which is probably opposite to that on which the imaginary voice is heard, is apparently specially implicated. And, to quote from a previous paper of mine on this subject, "just as the partial may merge into the general convulsive seizure, or as the limited disorder of sensory function, such as is seen in a severe neuralgia, may, though more rarely, be diffused in various directions along sensory nerves, so may the sensorial disturbance evinced by an illusion, or the psycho-sensorial disorder manifested by hallucinations, become generalized, involving the mental powers in varying degrees in different cases." In this primarily unilateral aspect, the correspondence between the physical and the mental seems complete. So may we consider it to be with the location of the lesions on which the respective symptoms depend. In the case of a hemi-chorea, we turn to the corpus striatum as the probable centre involved. In an epileptic seizure beginning by one-sided convulsions, and with retention of consciousness at its commencement, we now look rather to the surface of the brain, and particularly to the convolutions bounding the fissure of Rolando, as at least the immediate, and often, I believe, the sole, focus of irritation in such cases. Where there is a hemi-hyperæsthesia of cerebral origin, we consider it likely that the thalamus opticus, or its neighborhood, has suffered. In like manner, when a voice is projected outward and is always referred to one ear, we seem equally warranted in locating the centre of morbid action in some point of the opposite hemisphere; this point being the superior temporo-sphenoidal convolution, should Ferrier be correct in his conclusion as to the seat of the auditory centre.

What has been said respecting hearing is doubtless true, *mutatis mutandis*, of the other senses; but, in my experience, unilateral hallucinations of them are far less common.

Can Small-pox Come From Chicken-pox?

Before the Clinical Society, of London, Dr. Farquharson read a case on this question. Referring to the identity formerly believed to exist between variola and varicella, and to the labors of Heberden in apparently disproving this, the author drew attention to the opinion of Hebra, that no essential difference existed, and that, under favorable conditions, a severe epidemic of the major might arise from the infection of the minor disease. In illustration of this, he brought forward some cases recently under his observation in the Belgrave Hospital

for Children. Three mild cases of varicella occurred in surgical patients there during the month of May; and after the regular period of incubation a fourth made its appearance, so much more severe in type as to give rise to a suspicion of small-pox. But this view was negated, on the ground of the source of infection from a varicella patient in the next bed, the character of the eruption, and the perfect success of a primary vaccination, which became developed whilst the pustules were fully matured on the skin. About three weeks later, the nurse in attendance on this patient was seized with vomiting, pain in the back and chest, violent febrile symptoms, and a rubecloid rash, on which the true varicellous eruption subsequently became developed. The case was removed to St. Thomas' Hospital, and ran a very severe course, the secondary fever being strongly pronounced, and all the symptoms being those of the disease in an unmodified form. The question naturally arose, whether a direct line of infectious sequence could be traced between this and the fourth case of varicella; and although absolute proof was, of course, impossible, circumstantial evidence pointed strongly in this direction, for the following reasons. 1. The wards were at this time closed to visitors, and the chances of accidental outside infection were thus materially lessened. 2. The nurse's own absences from the hospital were, for the same reason, much limited, and probably stopped. 3. The nurse herself was thoroughly convinced that she had derived the source of the illness from the little patient, whom she had faithfully tended for so many days. And, granting the integrity of this chain of evidence, the conclusion seemed undoubted that one must allow that Hebra's teaching might be right after all, and small-pox might actually breed itself, under duly favorable conditions of soil and atmosphere, from chicken-pox.

Dr. Murchison thought the non-identity of varicella and variola had been fully settled forty years ago, by Dr. Gregory's observations at the Small-pox Hospital. The crucial test was, that cases of varicella, mistaken for variola and sent to the hospital, took variola from going there. Cases of varicella could be easily vaccinated, and three of Dr. Farquharson's cases had been vaccinated before having varicella. The case of the nurse was one of small-pox; but whether the illness of the child who had been last ill was one of modified small-pox, he had not quite gathered from the description. In practice, one ought to be able to distinguish variocella from modified variola. But even if all the children had variocella, and the nurse true variola, the evidence did not seem sufficient to show that she had taken it from either of them. He (Dr. Murchison) had seen cases of scarlet fever and of typhoid both come from the same house. Moreover, seeing that the small-pox poison was so widely diffused at present in London, it was difficult, perhaps, to say exactly how she caught her illness.

But she was not even kept at home; though, had she been, she might have contracted the disease from outside the hospital.

Retroflexion of the Virgin Uterus.

The following instructive case is given by Dr. E. Holland, in the *British Medical Journal*:—

E. M., aged 14, of scanty frame, with puberty advancing normally, and whose last menstruation had been somewhat profuse and attended with severe vomiting, failed, with symptoms very like the decided invasion of typhoid fever, about a week after the cessation of the flux. There were sharp pyrexia, dry brown tongue, frontal headache, and general abdominal tenderness. With these, however, there was pain of a peculiar character, severe, crampy, paroxysmal, and circumpelvic, and there was also "cutting" micturition. Poppy fomentations were ordered, with small doses of opium and acetate of ammonia; but the pain continued and was exaggerated. The mother observed that the pains were like those of labor, and came on every twenty minutes, doubling her up and occasioning wild cries of distress. At this stage, a vaginal examination disclosed retroflexion of the uterus, the retroflexed portion being hot and extremely tender; and restitution was at once effected by the sound. The paroxysmal pain did not again recur, and the next day found our patient cheerful, happy, and well.

On Membranous Dysmenorrhœa.

At a late reunion of the Obstetrical Society of London, Dr. John Williams read a paper on the "Pathology and Treatment of Membranous Dysmenorrhœa." The paper consisted of a narrative of fourteen cases of the affection (twelve of which had come under the author's own observation), a microscopical description of the membranes expelled, the method of treatment adopted in the cases, and conclusions drawn from the above data as to the nature of the affection and its treatment. It was maintained that in the study of the pathology of membranous dysmenorrhœa regard must be had to four things; 1, the history of the patient; 2, the structure of the product expelled; 3, the state of the uterus; and 4, the normal process of menstruation. The theories advanced respecting the pathology of the affection were briefly noticed. The post-mortem appearances met with in the uteri of two women suffering from the disorder were described, and the paper ended with the following conclusions:—1. The dysmenorrhœal membrane is not the product of conception, but the decidua ordinarily shed as débris with every menstrual epoch. 2. It is expelled as a whole, or in masses, in consequence of an excess of fibrous tissue in the wall of the uterus; this excess is due to imperfect evolution at puberty,

imperfect involution after parturition or abortion, or is the product of acute inflammation. 3. The membrane is neither the result of an ovarian congestion nor of a hypertrophy of the ordinary decidua. 4. The chronic inflammation present is the result of the monthly expulsion of the decidua in masses from the uterus, and plays an accidental part only in the formation of the membrane; the inflammation may, however, be independent of the expulsion of the membrane, but it has no causal relation to the formation of the latter. 5. Sterility is not necessarily associated with the affection, but is the result of the condition induced by the expulsion of the membranes in masses from the uterus, inflammation of the uterus and ovaries. 6. The membrane may be expelled without pain. 7. Inflammation of the uterus greatly aggravates the suffering caused by the passages of the membrane along the cervical canal. 8. Great relief may be obtained by curing the inflammation of the cervix, though the membrane continues to be expelled every month. 9. In order to effect a cure, the structure of the whole of the body of the uterus must be altered; the excess of fibrous tissue must be removed.

A Fatal Case of Syphilis.

The following case illustrates the ravages of this disease upon the innocent. It was reported to the Clinical Society of London in May, by Dr. Dowse:—

A young girl, aged 9, was admitted into the Central London Sick Asylum, at Highgate, on January 12th, 1875. There was no history of congenital syphilis, excepting that the mother had eight miscarriages, and no objective signs beyond an irregular and notched condition of the incisor teeth of the upper jaw. There was no interstitial keratitis, no pigmentary change of the choroid, nor optic neuritis. According to the mother's statement, her daughter was born without a blemish, and grew up to be a strong, healthy girl, until the month of July, 1873. At this time she was living neighbor to a family who were known to be syphilized, and she took an especial fondness for one of these children (an infant), who, in addition to other sores about the body, was suffering from mucous tubercles around the anus. She was constantly nursing this child, and, neglecting a scratch upon the flexor surface of the right forearm (upon which she carried the child), she soon found it to become very painful, and shortly an open wound, with indurated edges, was formed. The lymphatics became affected, and the axillary glands enlarged. The precise period of incubation was unknown. From a fine healthy girl she became rapidly emaciated, complained of aching pains all over the body, followed by the train of signs and symptoms which were fully delineated in Dr. Dowse's remarks, and in the photographs which were exhibited. He stated that there was considerable destruction of the alæ of the nose;

and that the ulceration extended to the pharynx, larynx, and, as was found at the post mortem examination, to the trachea and larger bronchi. So severe was the ulceration of the throat and pharynx, that swallowing was at times almost impossible. The eruption upon the skin first made its appearance as a lenticular syphilide, which rapidly ulcerated, giving rise to a fetid discharge, and crusts resembling a modified rupia. The chest, abdomen, flexor surfaces of the arms and thighs, were comparatively little, if at all, affected; but the head, the nose, the angles of the mouth, the extensor surfaces of the extremities, and the back, were covered. The rapidity of change from the destructive to the reparative process was a marked feature in the case. Dr. Dowse said that he could scarcely pass to its pathology without making some few remarks upon the treatment, and here he considered that he failed most unfortunately, for the reason that nature was doing battle most manfully. Upon several occasions, he thought her cured; but the disease again recurred with greater severity. He tried every remedy; but mercurial inunctions proved more beneficial than increasing doses of iodide of potassium.

Resection of the Knee Joint.

At a late meeting of German surgeons, Professor König, of Göttingen, discussed the subject of Resection of the Knee Joint, especially the importance of radically removing with the knife every vestige of the synovial membrane above the patella. Scraping is insufficient, and he has lately employed transverse division of the quadriceps tendon above the patella, total resection of the synovial pocket and patella, with consecutive antiseptic compression of the flap, as practiced by Volkmann; and by this proceeding he obtains primary union of the flap to the front of the femur. He advises the H incision, and a splint of his own, almost identical with that described by Mr. Barwell, in a recent number of the *British Medical Journal*. Plaster of paris splints he has abandoned in this operation. Volkmann, of Halle, followed him in the discussion. In a child ten years old, with most extensive disease, he got complete cicatrization in three weeks. The disadvantages of the operation are chiefly two—early mortality and the length of time required for cure. The former is obviated by antiseptics (in twenty one cases he has had only one death in the last three years, and that from meningeal tuberculosis, and two required secondary amputation), under which he has in one case had cicatrization in sixteen days. He uses the horse-shoe incision, dissects the flap up superficially to the patella, and fixes the bones by two catgut sutures. Billroth, of Vienna, *apropos* of the question, has had to abandon a plan he formerly recommended, of cutting through the soft bones with the amputating knife, as he found that the contusion of the bone thus produced did more harm than if a fine saw had been employed.

REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT MEDICAL LITERATURE.

—Dr. Wendell A. Anderson, of La Crosse, Wisconsin, has devised a "Self-copying Prescription Book," which will commend itself "on sight," to every physician who wishes to keep a copy of his prescriptions without any extra labor whatever, and at a merely nominal cost. The principle upon which it is used is exceedingly simple, not requiring any copying ink, nor any other writing apparatus than an ordinary lead pencil. We have never seen any plan better adapted for the purpose.

—"The Mortality of Surgical Operations in the Upper Lake States Compared with that of Other Regions." By Edmund Andrews, A.M., M.D., Professor of Principles and Practice of Surgery in the Chicago Medical College, assisted by Thos. B. Lacy, M.D., Assistant Surgeon in the National Soldiers' Home.

A monograph of 123 pp., a reprint from the *Chicago Medical Journal and Examiner*. The author has taken up each important surgical operation as performed in the Lake States, and compared the same operation as performed in the United States, as well as abroad. It shows that lithotomy is more dangerous in the Lake regions, and many of the major operations less dangerous, than in other localities. A very interesting and valuable thesis, and reflects great credit upon the gentlemen.

—A very fine chromo-lithograph of the *Eucalyptus Globulus*, is issued with the July, 16th number of "*New Remedies*," just received.

Received—

"Syphilitic Phthisis." A paper read before the Missouri State Medical Association, by Wm. Porter, M.D., St. Louis. A reprint from "*Transactions*."

Transactions of the Medical Faculty of the District of Columbia, July, 1877.

Papers by Burt G. Wilder, M.D. 1. On the Brains of some Fish-like Vertebrates. 2. On the Serrated Appendages of the Throat of *Amia*. 3. On the Tail of *Amia*.

"Hydro-therapeutics." A paper read before the Academy of Medicine, Cincinnati, Ohio, November 12th, 1876, by Dr. H. Illony.

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**THE PROBLEM OF THE DIMINUTION OF
FAMILIES.**

The progressive diminution of the family has been made a subject of close study by European statisticians, and by some in America. In Europe the annual births vary from twenty-seven per thousand of the population in France, which is the lowest, to fifty-one per thousand in Russia, which is the highest. Why this vast difference? Is it owing to some natural law of race, some social law of productive labor and nutrition, or to deliberate purpose in avoiding offspring?

In this country the problem is yet more striking. In the old colonial States the fertility of American born couples is markedly less than that of foreign born couples. In Vermont American born parents have but twenty-six children per thousand annually, which is even less than in France; while foreign born parents have sixty-five per thousand annually, which is much more than in Russia (*Vermont Registration Report, 1872*). In all the old States a similar,

though not so great, a disproportion is seen. Here the climatic conditions are the same, and facilities of nutrition are open alike. How explain the vast discrepancy?

Confining our study more particularly to the United States, we would first note that many observations go to prove that emigrants are usually more productive than their neighbors who remained at home; providing the emigration is to an equally fertile country, the change of climate favors an exuberant reproduction. The Canadian *habitans*, the Irish in this country, the Germans here, have larger families than their relatives in the old country. As time progresses this unusual fertility diminishes.

The social position modifies materially the size of the family. As a rule, the development of the intellectual faculties lessens the attractions of the sensual passions; a sensitive and delicate nervous system renders a woman less able to bear numerous children; the exhaustion of the strife of wits in the complicated business of modern life renders the man less attentive to his reproductive powers; the physiological aptitude for procreation is diminished in both sexes.

But, allowing due weight to these natural laws, there is no doubt but that economical considerations are a leading, if not the main, cause of the diminished families of American-born parents. As man increases in civilization his wants increase. He wishes for his children a more complete education than he himself has received; he desires for them books, pictures, society, travel, leisure to think, study, and improve their minds. Then, too, he feels higher duties are open to himself than that of begetting babies and getting them bread; the love he bears his wife is not that sensual lust which wants a woman wherewith to gratify itself, but a holier fire which longs to elevate the partner of his life, and which dictates to him that this he can never do if she is to spend her best days in "suckling fools, and chronicle small beer." Therefore, for her sake, for his own sake, and

for the sake of his posterity, he decides that it is better to have a few children, and to care for them, and to educate them well, than to have a whole litter who will tumble up as luck may have it.

There is no doubt but that this end is largely accomplished by what the Malthusians call "preventive checks." That abortion and feticide are two of them, in a small number of instances, cannot be doubted; and they are very reprehensible checks, which the profession should use its utmost endeavors to abolish; but that all checks whatever should be embraced in its condemnation we do not believe; in fact, emphatically deny. On the contrary, such economical measures are an integral part of civilization, and the profession had much better study to ascertain which are harmless and which not, so that they can advise judiciously on the subject, than to allow a baseless prejudice to interfere with their usefulness.

The use of such checks, when in themselves not injurious, is in their results beneficial. For the proof of this we have but to turn to the statistics lately obtained by the various Health Boards. Dr. BAKER, of Michigan, has shown that in a given number of children of American born parents the mortality is very decidedly less than in an equal number of children of foreign born parents. Still later, Dr. H. P. BOWDITCH, of Massachusetts, has, by very careful examination, demonstrated that in that old commonwealth children of American born parents are taller and heavier than those of foreign born parents of the same age (*Report of State Board of Health, 1877*). That they receive, as a rule, better education and more careful nurture, is obvious.

The question, therefore, is placed in this form: Is the duty of the parent to the offspring, of the citizen to the commonwealth, better fulfilled by producing a few children who shall have greater viability, grow up taller and stronger, and receive a higher education, than by producing double the number,

who shall be inferior in all these respects? So put (and it is correctly put), it is simply the question between having a higher or a lower civilization in the future; and as on this subject no two opinions are possible, the question answers itself.

NOTES AND COMMENTS.

Lead Colic from Swallowing a Bullet.

A rather curious case was recently reported to a London Society, by Dr. Turnbull, of Coldstream. Early one morning he was summoned to see a boy, aged 9, who was suffering great pain in the abdomen. The history was that he had recently swallowed a lead bullet. No alarm had been felt by his parents at the time he did this; but they gave him a dose of castor oil and put him to bed. The pain when he saw him was very severe, paroxysmal, and felt chiefly around the navel. At first he thought it was due to mechanical obstruction; but soon he felt sure it had more of the character of lead-colic. There was, however, no blue line on the gums. The treatment adopted was hot poultices locally, opium, sulphate of magnesia, and diluted sulphuric acid, for the purpose of coating the bullet with an insoluble sulphate. Chlorodyne was also employed. The severe pain, however, continued, and also strangury, along with some internal hemorrhage. He then lost flesh rapidly, and ultimately died, three weeks after swallowing the bullet. In such cases, Dr. Turnbull said that an emetic should be administered at once, and a guarded prognosis given.

The Cold Bath in Infantile Diarrhoea.

This has long been known as a most efficacious measure, even in extremis. An Italian practitioner, Dr. Wocke, has lately been drawing attention to the same plan of treatment. He refers more particularly to the terrible epidemics of diarrhoea which prevail in summer. The epidemic is due, he says, in part to the deleterious influence of the elevated temperature on the infantile organism, and in part to the injurious effect which the heat exerts on the aliment, the milk, and the air inspired. For this state of things he recommends cold bathing, of which he has a high opinion. Wasting children, reduced by vomiting and diarrhoea,

were as if regenerated by the second day after the baths were commenced. The restlessness disappeared; sleep was restored, the appetite increased, and the diarrhoea diminished. The cold baths act on the child as a tonic, and internal remedies then exert a better influence. Dr. Wocke commences his treatment with cold douches to the head and stomach; then passes to baths, commencing at a temperature of 26° C., and reducing them to 22°. Three baths a day are sufficient.

Carelessness in Surgery.

Many surgeons maintain that the success of Lister's antiseptic treatment is more owing to the care and cleanliness he inculcates than to anything else. The following extract from a Paris letter shows how much these are wanting in the hospitals of that city. "At one of the best-known hospitals in Paris I witnessed the excision of a fatty tumor, the operation being as simple as one as possible. The man was put to bed, and next day a case of facial erysipelas was taken into hospital and deliberately placed in the next bed. Needless to say, the patient who had been operated upon took the disease and died of it. In another hospital a case of erysipelas was introduced from outside and placed between two patients who were convalescent from acute diseases. They both took the disease and died, and in addition several other patients in the same ward took the disease. As no disinfection or isolation was practiced, it was long before the ward was free from the infection. These cases are only examples of what is taking place almost every day in Paris. It is really incredible that such a state of things should exist in a great town like Paris, which prides itself upon being the home of surgery, and boasts that it has some of the finest surgeons of the world."

Paper Splints.

Dr. M. R. Speare, of Rochester, N. Y., sends us a sample of his "paper splints." He writes:—I employ strong manilla-paper and book-binder's starch, which consists of flour and water boiled to the consistency of jelly. I first prepare my paper by cutting it into strips long enough to encircle the limb at its greatest circumference, and varying from half an inch to an inch and a quarter in width. Having an assistant with the starch and a brush ready, I apply a flannel roller as far as I wish the splint

to extend; then smear this with the starch, apply the strips of paper—after starching—the same as a many-tailed bandage, brush this over with starch again, and apply another layer as before, until I get the required thickness, which is usually six or seven layers, according to the firmness of the paper used. The whole process will occupy about fifteen minutes.

When this is dry, which will take two or three hours, by the aid of hot bricks or sand bags on each side of the splint, it is very light and comfortable, fitting as nicely as a stocking, and is as firm as the same thickness of wood.

Carbolic Acid in Diarrhoea.

A correspondent, Dr. J. W. Palmer, of Ohio, writes us:—Recently, I have employed carbolic acid in the treatment of diarrhoea, both acute and chronic form of the disease, with signal success. It is given in one or two drop doses, largely diluted with water, from two to four hours apart. It controls pain, and corrects the fetor of the discharges, and otherwise cures the disease. If severe pain be present, and the discharges profuse, opium and creta preparata, with astringents, may be alternated with it. But my experience is that carbolic acid in most cases is all that is required.

Bichromate of Potash as an Antiseptic.

M. Laujorrais lately presented a note to the French Academy, on the antiseptic properties of bichromate of potash. Experiments had shown him that the addition of one-hundredth part of bichromate in ordinary water prevents the putrefaction of all sorts of organic matter, such as meat, urine, etc. A thousandth part of bichromate prevents beer from turning sour. After three months' immersion in a solution, meat was hardened and dry.

Cotton-Wool Dressings.

Dr. Desormeaux read, lately, a memoir on union by the first intention, under cotton-wool dressings. To obtain this result, when the amputation or disarticulation is finished, M. Desormeaux washes the wound with water and carbolized alcohol, or solution of chloral; then applies the suture by the aid of fine annealed iron wires, leaving in the most suitable place a space without junction, where he places a drainage-tube. Afterwards he applies the cotton-wool dressing to the stump, removing it after twelve or fifteen days, to take away the

drainage-tube, the ligature-wires, and the sutures, which have become useless. Then, after a fresh washing out, he again applies the cotton-wool dressing, and leaves it twelve or fifteen days before finally removing it; at this stage the cicatrix is consolidated. Up to the present this method has yielded excellent results.

The Vegetable Origin of Malaria.

Dr. Salisbury, of Ohio, some years ago claimed to have discovered the microscopic vegetation which produces malarial disease. Recently, two Italian physicians, Signori Lanzi and Terrigi (*Monthly Microscopical Journal*), have discovered minute dark granules belonging to Cohn's group of pigmented sphaero-bacteria within the endochrome of algae, which increase in number with decay of the latter. These granules yield on cultivation the *Monilia penicillata* of Fries, and are identical with the pigment granules of the liver, spleen, and blood of those who have suffered from malarial diseases. Lanzi has even obtained a *Zoogloea* by cultivation of these granules from a human liver. On the evaporation of the marshy pools of the Campagna in summer, great sheets of decomposing algae are exposed to the air, the sphaero-bacteria abound, and are found floating in vast numbers in the atmosphere, to the height of fifty centimetres above the level of the marsh.

Trichinosis in Saxony.

In a "Statistical Account of the Epidemics of Trichinosis that have occurred in Saxony during 1860-75," published by Dr. Reinhard in the *Archiv für Heilkunde*, Band xviii, he furnishes a table which shows that within this period thirty-nine epidemics have occurred, giving rise to 1267 cases of trichina disease, and to nineteen deaths, four of these occurring in males and fifteen in females. Only a very small proportion of the cases arose from eating raw pork, while one-half were produced by eating smoked sausages (*Knackwürste*), giving rise to, however, only two deaths. Among 340 persons who partook of well prepared sausages (*Bratwürste*) eight died. The epidemic appeared for the first time in fifteen places, more than once in seven places, and seven times in Dresden. In most instances the number of persons attacked was few, the highest numbers amounting to 209, 140, and 199; one death only result-

ing from the combined total of 548 cases occurring in these three epidemics. In several instances the number of cases was as low as from one to seven. The mean (thirty-two and a half) of the 1267 cases was scarcely exceeded in a fourth part of the places, while in three-fourths of the other places the mean was not reached. In many instances the number of cases was so small as to show that a trichinized animal may be entirely consumed without inducing the disease at all. The same conclusion is arrived at from the comparison of the number of slaughtered trichinized animals and the number of cases of the disease. It is calculated that 100 trichinized pigs will give rise to only four cases of the disease in man.

CORRESPONDENCE.

Ammonia in Snake Bite.

ED. MED. AND SURG. REPORTER:—

I was called on the evening of November 5th, to see B. H., who had been bitten by a "copperhead." I arrived about two hours after he was bitten, and found him showing all the symptoms of snake poisoning. He had been bitten on the foot by a large "copperhead," the bite looking as though it had struck him twice. Immediately on being bitten he applied a ligature around the ankle, and a poultice of clay and onions to the bite. The ligature had the effect of stopping the venous circulation, so that the foot and leg below it were swollen as full as the skin would permit. But it had not prevented the absorption of the poison, as was shown by the rapid pulse, nervous prostration, chilliness, and especially by the vomiting, which was of that peculiar coffee grounds appearance indicative of hemorrhage into the stomach. This symptom is spoken of by writers on the subject, but although this was my fourth case I had never seen it before.

The treatment consisted in the hypodermic injection of fifteen minims of spirits of ammonia aromatz, diluted with an equal quantity of water, into the foot, in the neighborhood of the bite (the ligature having been previously removed), and the internal administration of half a teaspoonful to a teaspoonful of the aromatic spirits every hour, until the urgent symptoms were past. Marked relief was experienced within an hour, and in a week's time he was well, not having been confined to the house a day. But his limb swelled, skinful, part way up the thigh, and when the swelling had subsided, showed all over the calf of the leg that peculiar bruised appearance which seems to be characteristic to parts after snake bite.

This is the fourth case that I have treated. The first (recorded in full in the Chicago Medi-

cal Journal, for December, 1872), was that of a man badly bitten on the hand, twelve hours before I saw him. He was treated in the same manner as above, except that in his case I made six injections.

The second case was a girl of sixteen or seventeen years of age, bitten on the foot, and the third a girl of nine or ten, bitten on the hand. These last two were not severe bites, evidently by small snakes, and I did not make a hypodermic injection, simply gave the ammonia internally, and applied a lotion of the same to the affected part.

As this is the season when snake bite is most likely to happen, I have thought fit to bring these cases to your notice, and thus add this testimony as to the efficacy of ammonia in snake bite.

Prof. Halford has been the principal advocate of this mode of treatment, which he lauds very highly. His plan of treatment, as stated by Bollinger, in Ziemssen's *Cyclopædia*, is as follows:—"He injects thirty drops of water of ammonia (=gr. 0.95 ammonia) into a superficial vein, which is immediately followed by a brisk activity of the circulatory and nervous systems; this procedure is repeated as soon as the stimulating influence of the remedy is suspended."

There is a contrariety of opinion as to its efficacy. Experienced observers, as Fayrer and Richards, assert that it is of no avail. I can bear testimony to the correctness of the effect of the hypodermic injection of ammonia, as observed by Prof. Halford. This was strikingly illustrated in my first case. The person had been bitten twelve hours before I saw him; the arm was swollen almost to bursting, and the swelling extended on to the pectoral region; the breathing was hurried; the countenance anxious; the pulse excessively rapid, feeble and irregular, 150 to 160 per minute. I made two injections of twenty minims each (aque ammonia and water) into the bitten arm. Within twenty minutes the pulse had come down to 70 per minute, and was full and regular.

I have no theory to offer as to its action. I have not regarded it as an antidote to the snake poison, but rather as a pure stimulant. If it always acts as well as it has in these cases, I think we will need nothing better. I have never used alcoholics, believing their use, as advocated, to be unphilosophical.

Mifflintown, Pa. THOMAS A. ELDER, M. D.

Ignorance of Pregnancy.

ED. MED. AND SURG. REPORTER:—

Noticing in the *REPORTER*, recently, two communications on the above subject (from Drs. Butcher and Ross), I thought I would add my mite on the same topic, viz., "Can a woman carry a child to full term and not be aware that she is pregnant?"

It is a subject to which I had previously given but little attention. On February 10th,

1875, I had a similar case, and never thought of reporting it, but will do so now, and you can make such disposition of it as suits you best.

Mrs. H., a married lady, and mother of one child, being in very poor health (having phthisis pulmonalis), sent for me (to use her own words) to see if I could tell her what was the matter with her side and bowels; she had great pain in her left side, and her bowels were swollen so she thought there was an abscess which needed to be opened.

This tumor had been growing gradually for four or five months; she had never felt any motions, and did not believe she was pregnant; her catamenial discharges were irregular, as regards time—one, two or three months apart. Upon examination I discovered the tumor to be nothing more nor less than a living child, and that it was likely to be born inside of twenty-four hours. I administered an opiate, and the child was not born till forty-eight hours after; weight about two and a half pounds; is still living, and doing well.

I forgot to state that her appearance when on her feet did not show any enlargement of the abdomen; the mammary glands secreted nothing; she had no milk for the child. She died in about eight weeks after, with phthisis.

Morea, Ill.

J. A. INGLIS, M. D.

Hidden Hemorrhage from the Umbilicus.

ED. MED. AND SURG. REPORTER:—

A case in the last "*Compendium*" calls out an experience of my own.

June 12th, 1877, I was called to attend Mrs. G. H., in labor with her fifth child, and arrived just in time to tie the cord and remove the placenta. The child was large and well-formed. I visited the case once afterward, and found everything in good order.

On June 29th I was called in haste to see the babe, which was said to be bleeding to death. I hurried down (a mile from home), and found the child's clothing saturated with blood, but none flowing. The babe seemed to be exsanguined, and died in a few moments after my arrival. The blood evidently came from the umbilicus, though there was no apparent rupture, and the parents say that no possible violence was done to it. It had bled for two days.

Two weeks ago, Sunday, the fourteen weeks' old boy of Mr. B. fell out of bed, striking his head on a chair round. The Tuesday following I was called in, and found a puffy swelling, about an inch below the occipital prominence of the right occipital bone, through which I could feel the edges of the bone forming a semilunar opening, two and one-half inches long by over one-half inch wide, the upper edge projecting one-fourth of an inch from the usual plane.

Slight compression with bandages wet with aconite and arnica formed the only treatment. The swelling has disappeared, but the opening in the skull has not closed. What other treatment is advisable?

C. A. FREEMAN, M.D.

Illinois.

Hydrate of Chloral in Inebriety.

ED. MED. AND SURG. REPORTER:—

I wish to add my testimony as to the danger of using hydrate of chloral in cases of inebriates. In last week's REPORTER, page 71 of current volume, a case is mentioned, and quite a number are reported by Dr. Madison Marsh, in vol. xxxii, page 45, of the REPORTER. Two very marked cases of sudden death while using chloral after hard drinking in cases of confirmed drinkers, have come within my knowledge. The first was in the case of a public officer, apparently in perfect health, who, after walking about in a large yard, carrying his boy in his arms, came in from his walk, laid down to rest, and died in less than five minutes. He was attempting to straighten up from his last spree, by using chloral as a substitute for alcohol. I do not know the quantity taken in this case, but was informed that the dose was not an excessive one.

The second case is that of a young physician, a student of mine, and a graduate of the Jefferson Medical College. He was drinking alcohol to excess, and at the same time using chloral. I had repeatedly warned him of the danger, not only of using alcohol, but of the special danger of chloral while drinking. Citing to him the above case, and referring him to Dr. Marsh's cases, he made light of the warning; he walked about a quarter of a mile to visit a patient, sat down in a chair, and died in a moment. He also was attempting to straighten up on chloral. He was in the habit of using chloral in large doses, from forty to sixty grains.

As chloral would seem to be a very appropriate remedy in the sleeplessness of delirium tremens, the profession should be put upon its guard against its use in cases of inebriety.

Indiana.

E. T. SPOTTSMOOD, M.D.

NEWS AND MISCELLANY.

The Juniata Valley (Pa.) Medical Association.

The following officers were elected at the last meeting, for the ensuing year: President, Dr. J. Irvin Marks, of Lewistown; Vice-Presidents, Drs. Rowan Clark, of Bell's Mills, Blair county; Sidaey Thompson, of Spruce Creek, Huntingdon county; J. N. Richards, of Bedford county; Samuel Harshberger, of Mifflin county; J. P. Sterrett, of Juniata. Recording Secretary, Dr. W. C. Roller, of Hollidaysburg; Corresponding Secretary, Dr. Crawford Irwin, of Hollidaysburg; Treasurer, Dr. Isaac N. Grubb, of Juniata.

Diphtheria in Lowell in 1876.

The report of the Massachusetts State Board of Health says that the year 1876 was a memorable one for Lowell, because in it the city has been visited by the most fatal epidemic ever known in its history, there being in all 231 deaths.

Personal.

—Dr. E. F. Winslow, of Salt Lake City, was finally cremated last month. (See page 80).

—Dr. W. Bathurst Woodman, a young physician of much promise, died recently in London.

—Dr. Edward Warren (Bey), a prominent American physician of Paris, has just been created a Knight of the Order of Isabel the Catholic, as a recognition of the professional skill displayed by him in the successful treatment of some Spanish personages of high position.

—Dr. James McClelland, of the Navy, died on Saturday morning, August 4th, at his residence in Germantown. He was connected with the Naval service as assistant surgeon or surgeon, from June 20th, 1838, until 1868, when he made his last cruise. On the 3d of March, 1871, he became medical director on the retired list.

Items.

Of the 8805 persons who are set down in the census report as being engaged in manufactures and mechanical industries in Lynn, 5689 are employed in some branch of shoemaking.

—A Jewish butcher, named Doppelmann-Freund, has just died at Prague, aged 117. His wife had lived to 99.

QUERIES AND REPLIES.

MR. EDITOR:—A gentleman, in perfect health, living in my community, lost his left testicle by inflammatory process, in the year 1871. I would like to inquire of the medical profession, through your journal, whether, under favorable circumstances, he can beget his race.

"A REGULAR PHYSICIAN."

Dr. J. C., of Mass., desires to know the best treatment for poisoning from *Cornus Florida* (no particulars or symptoms given).

MARRIAGES.

FREEMAN—KNECHT.—May 24th, 1877, at the bride's home, by Rev. N. Z. Snyder, E. J. Freeman, M. D., of Freemansburg, Pa., and Enille, daughter of John Knecht, Esq., of Shimersville, Pa.

MANIRE—BROWN.—On July 25th, 1877, at the residence of the bride's stepfather, W. W. Brooks, six miles north of Franklin, Tenn., by the Rev. N. J. McDonnal, W. H. Manire, M.D., of Rutherford county, Tenn., and Miss C. Ernestine Brown, only daughter of the late Dr. H. T. Brown.

Attendants—Miss Emma Lillie and Miss Imogen Cox, Mr. N. L. Brown with Miss Mary E. Brooks, Mr. W. M. Farris with Miss Ida P. Beech.

TRADER—PORTER.—On July 12th, 1877, by Rev. — Gilson, J. L. Trader, M. D., of Uniontown, Pa., and Miss Carrie M. Porter, of Perryopolis, Pa.

DEATHS.

POLK.—On July 24th, in Philadelphia, Willie J., son of Dr. C. G. and Phebe Y. Polk, aged 7 months, 28 days.

THURMAN.—At Cedarville, Mo., July 13th, after an illness of twelve hours, of cholera infantum, Allen Garnet, only son of Dr. J. L. and E. L. Thurman, aged 1 year, 10 months and 20 days.